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EXAMINER	
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ART UNIT	PAPER NUMBER
2416	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/806,800	FAYAD ET AL.	
	Examiner	Art Unit	
	ABDULLAH RIYAMI	2416	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30-45 and 56-57*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *30-45,56 and 57* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *30-45, 56 and 57* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This is a response to an amendment/response filed on 02/10/2009.

2. Claims 30 and 38 have been amended. New claims 56 and 57 have been added.

3. Claims 56 and 57 have been added.

4. Claims 30-45 and 56-57 remain pending in the application.

Response to Arguments

5. Applicant's arguments with respect to claims 30-45 and 56-57 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 30-33, 38-41, and 56-57 have been rejected under 35 U.S.C. 103(a) as being unpatentable over by Farris et al. (US 6438218 B1) in view of Walsh et al. (US 6636519 B1).

As per claim 30, Farris teaches of a method for use by a first gateway (see figure 4, internet module 72) to establish data communication between a first client modem (see figure 4, modem 64) and a second client modem (see figure 4, modem 66) over a packet network (see figure 4, internet 84), the method comprising: receiving a call from the first client modem over a first telephone line (see column 12, lines 23-45, internet call is made, and figure 4, internet module 72); negotiating, in response to the call, over the first telephone line with the first client modem to establish a first physical modem connection (see column 10, lines 10-67, internet module establishes connection with modem, see column 9, lines 34-40, modem establishes line connection to the internet module) between the first client modem and a first gateway of said first gateway (see column 9, lines 34-40, modem establishes line connection to the internet module);

informing a second gateway of the call over the packet network (see, receiver router, column 10, lines 1-30, the packets are dispatched fro originator and to the destination router and internet module 74);

establishing a gateway-to-gateway transport link with the second gateway over the packet network (see TCP/IP format, column 10, lines 1-30);

determining a set of data link parameters supported by the first client modem, the first gateway, a second gateway of the second gateway and the second client modem (see column 12, lines 10-23, communication between modem 64 and modem 66, would not be possible if link parameters are not set, the destination router and its processor perform inverse functions of the originating router and make necessary translations and column 6, lines 5-22, TCAP negotiations, specifying routing information);

establishing a first data link protocol over the first physical modem connection using the set of data link parameters (see column 6, lines 60-64, the lines or trunks may use digital protocols such as T1 or ISDN, each interface module also include digital service unit to generate tones, see column 12, lines 10-23, communication between modem 64 and modem 66, would not be possible if link parameters are not set, the destination router and its processor perform inverse functions of the originating router and make necessary translations);

wherein data is communicated between the first client modem and the second client modem over an end-to-end reliable connection (see TCP/IP format, column 10, lines 1-30) between the first client modem at one end and the second client modem at the other end (see figure 4, modem 64, modem 66), wherein the end-to-end reliable

connection (see TCP/IP format, column 10, lines 1-30) uses the set of data link parameters (see column 12, lines 10-23, communication between modem 64 and modem 66, would not be possible if link parameters are not set, the destination router and its processor perform inverse functions of the originating router and make necessary translations).

Farris does not expressly disclose that the first gateway has a modem that establishes the physical connection to the client modem, and the modem handshaking communications of receiving a first set of data link parameters supported by said first client modem and receiving a second set of data link parameters supported by both a second gateway modem of said second gateway and said second client modem, and harmonizing said set of data link parameters supported by said first gateway with said first set of data link parameters supported by said first client modem and second set of data link parameters to determine a final set of data link parameters supported by all modems.

Walsh discloses that the first gateway has a modem that establishes the physical connection to the client modem (see figure 14 c, modem card and gateway card), and the modem handshaking communications of receiving a first set of data link parameters supported by said first client modem (see column 23, lines 32-37, data is passed between the modems on cards 403-408 and gateway card 605, data link layer entity that builds/parses outgoing/incoming frames, the data link layer segments data into messages or frames) and receiving a second set of data link parameters supported by both a second gateway modem of said second gateway and said second client modem

(see column 29, lines 5-10, call setup between client c1 and client c13, see column 29, lines 25-30, demodulates according to the modulation standard dictated by the set mode parameters transmitted to modem447, see column 29, lines 40-42, the TCP/IP protocol is employed to provide an end-to-end connection-oriented path to client c13, see also column 30, lines 5-10, an outgoing call according to the modulation standard dictated by the set mode parameters transmitted over the packet bus) and harmonizing said set of data link parameters (see column 23, lines 32-37, data is passed between the modems on cards 403-408 and gateway card 605, data link layer entity that builds/parses outgoing/incoming frames, the data link layer segments data into messages or frames) supported by said first gateway with said first set of data link parameters supported by said first client modem between said first gateway modem and said first client modem (see figure 14b and figure 14c, modem card 408 and gateway card 605, see column 25, lines 20-30, while in negotiation state, each card sends an XID frame to the other card 605, the XID frame contains information that is used to get both cards in a link to agree on certain parameters, such as receive window size and packet bus block size, after the exchange of XID frames, it stores various agreed parameters) and second set of data link parameters (see column 29, lines 5-10, call setup between client c1 and client c13, see column 29, lines 25-30, demodulates according to the modulation standard dictated by the set mode parameters transmitted to modem447, see column 29, lines 40-42, the TCP/IP protocol is employed to provide an end-to-end connection-oriented path to client c13, see also column 30, lines 5-10, an outgoing call according to the modulation standard dictated by the set mode parameters

transmitted over the packet bus) to determine a final set of data link parameters supported by all modems (see column 29, lines 5-10, call setup between client c1 and client c13, see column 29, lines 25-30, demodulates according to the modulation standard dictated by the set mode parameters transmitted to modem447, see column 29, lines 40-42, the TCP/IP protocol is employed to provide an end-to-end connection-oriented path to client c13).

Walsh and Farris are analogous art since they are from the same field of endeavor of voice calls over the packet network.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to use Walsh's technique of having the first gateway having a modem that establishes the physical connection to the client modem (see figure 14 c, modem card and gateway card), and the modem handshaking communications of receiving a first set of data link parameters supported by said first client modem (see column 23, lines 32-37, data is passed between the modems on cards 403-408 and gateway card 605, data link layer entity that builds/parses outgoing/incoming frames, the data link layer segments data into messages or frames) and receiving a second set of data link parameters supported by both a second gateway modem of said second gateway and said second client modem (see column 29, lines 5-10, call setup between client c1 and client c13, see column 29, lines 25-30, demodulates according to the modulation standard dictated by the set mode parameters transmitted to modem447, see column 29, lines 40-42, the TCP/IP protocol is employed to provide an end-to-end connection-oriented path to client c13, see also column 30, lines 5-10, an outgoing call according to

the modulation standard dictated by the set mode parameters transmitted over the packet bus) and harmonizing said set of data link parameters (see column 23, lines 32-37, data is passed between the modems on cards 403-408 and gateway card 605, data link layer entity that builds/parses outgoing/incoming frames, the data link layer segments data into messages or frames) supported by said first gateway with said first set of data link parameters supported by said first client modem between said first gateway modem and said first client modem (see figure 14b and figure 14c, modem card 408 and gateway card 605, see column 25, lines 20-30, while in negotiation state, each card sends an XID frame to the other card 605, the XID frame contains information that is used to get both cards in a link to agree on certain parameters, such as receive window size and packet bus block size, after the exchange of XID frames, it stores various agreed parameters) and second set of data link parameters (see column 29, lines 5-10, call setup between client c1 and client c13, see column 29, lines 25-30, demodulates according to the modulation standard dictated by the set mode parameters transmitted to modem447, see column 29, lines 40-42, the TCP/IP protocol is employed to provide an end-to-end connection-oriented path to client c13, see also column 30, lines 5-10, an outgoing call according to the modulation standard dictated by the set mode parameters transmitted over the packet bus) to determine a final set of data link parameters supported by all modems (see column 29, lines 5-10, call setup between client c1 and client c13, see column 29, lines 25-30, demodulates according to the modulation standard dictated by the set mode parameters transmitted to modem447, see column 29, lines 40-42, the TCP/IP protocol is employed to provide an end-to-end

connection-oriented path to client c13) as a modification in Farris's VOIP gateway method and system (see figure 4, internet module 72).

The motivation to combine would have been to have a gateway modem and client modem that is capable of detecting errors on the link in the event of any unrecoverable error that occurs affecting the communications between the modems (see column 24, lines 66-67 and column 25, lines 1-3, Walsh).

As per claim 56, Farris teaches of a method for use by a first gateway (see figure 4, internet module 72) to establish data communication between a first client modem (see figure 4, modem 64) and a second client modem (see figure 4, modem 66) over a packet network (see figure 4, internet 84), but does not expressly disclose harmonizing said set of data link parameters supported by said first gateway with said first set of data link parameters supported by said first client modem is performed by exchanging XID frames between said first gateway modem and said first client modem.

Walsh discloses harmonizing said set of data link parameters (see column 23, lines 32-37, data is passed between the modems on cards 403-408 and gateway card 605, data link layer entity that builds/parses outgoing/incoming frames, the data link layer segments data into messages or frames) supported by said first gateway with said first set of data link parameters supported by said first client modem is performed by exchanging XID frames between said first gateway modem and said first client modem (see figure 14b and figure 14c, modem card 408 and gateway card 605, see column 25, lines 20-30, while in negotiation state, each card sends an XID frame to the other card 605, the XID frame contains information that is used to get both cards in a link to agree

on certain parameters, such as receive window size and packet bus block size, after the exchange of XID frames, it stores various agreed parameters).

Walsh and Farris are analogous art since they are from the same field of endeavor of voice calls over the packet network.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to use Walsh's technique of harmonizing said set of data link parameters (see column 23, lines 32-37, data is passed between the modems on cards 403-408 and gateway card 605, data link layer entity that builds/parses outgoing/incoming frames, the data link layer segments data into messages or frames) supported by said first gateway with said first set of data link parameters supported by said first client modem is performed by exchanging XID frames between said first gateway modem and said first client modem (see figure 14b and figure 14c, modem card 408 and gateway card 605, see column 25, lines 20-30, while in negotiation state, each card sends an XID frame to the other card 605, the XID frame contains information that is used to get both cards in a link to agree on certain parameters, such as receive window size and packet bus block size, after the exchange of XID frames, it stores various agreed parameters) as a modification in Farris's VOIP gateway method, apparatus and system (see figure 4, internet module 72).

The motivation to combine would have been to have a gateway modem and client modem that is capable of detecting errors on the link in the event of any unrecoverable error that occurs affecting the communications between the modems (see column 24, lines 66-67 and column 25, lines 1-3, Walsh).

As per claim 31, Farris et al. teaches of a method, wherein the second gateway informs the second client modem of the call over a second telephone line (see, receiver router, column 10, lines 1-30, the packets are dispatched fro originator and to the destination router and internet module 74), and wherein the second gateway negotiates with the second client modem over the second telephone line to establish a second physical modem connection (see column 12, lines 10-23, communication between modem 64 and modem 66, would not be possible if link parameters are not set, the destination router and its processor perform inverse functions of the originating router and make necessary translations).

As per claim 32, Walsh teaches of a method, wherein, during the harmonizing, the second gateway establishes a second data link protocol over the second physical modem connection using the set of data link parameters (see column 29, lines 5-10, call setup between client c1 and client c13, see column 29, lines 25-30, demodulates according to the modulation standard dictated by the set mode parameters transmitted to modem447, see column 29, lines 40-42, the TCP/IP protocol is employed to provide an end-to-end connection-oriented path to client c13, see also column 30, lines 5-10, an outgoing call according to the modulation standard dictated by the set mode parameters transmitted over the packet bus).

Walsh and Farris are analogous art since they are from the same field of endeavor of voice calls over the packet network.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to use Walsh's technique wherein, during the harmonizing, the second gateway

establishes a second data link protocol over the second physical modem connection using the set of data link parameters (see column 29, lines 5-10, call setup between client c1 and client c13, see column 29, lines 25-30, demodulates according to the modulation standard dictated by the set mode parameters transmitted to modem447, see column 29, lines 40-42, the TCP/IP protocol is employed to provide an end-to-end connection-oriented path to client c13, see also column 30, lines 5-10, an outgoing call according to the modulation standard dictated by the set mode parameters transmitted over the packet bus) as a modification in Farris's VOIP gateway method, apparatus and system (see figure 4, internet module 72).

The motivation to combine would have been to have a gateway modem and client modem that is capable of detecting errors on the link in the event of any unrecoverable error that occurs affecting the communications between the modems (see column 24, lines 66-67 and column 25, lines 1-3, Walsh).

As per claim 33, Farris et al. teaches of a method, wherein the gateway-to-gateway transport link is a reliable transport link (see TCP/IP format, column 10, lines 1-30). However using an unreliable transport link as the gateway-to-gateway transport link is well known in the art.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use an unreliable transport link as the gateway-to-gateway transport link in Farris's and Walsh's telecommunication method and devices. The motivation to combine would have been to have both reliable and unreliable transport link such as

TCP and UDP, so that the method can provide and charge its users, according to different types of quality of service.

As per claim 38, Farris et al. teaches of a first gateway (see figure 4, internet module 72) capable of establishing data communication between a first client modem (see figure 4, modem 64) and a second client modem (see figure 4, modem 66) over a packet network (see figure 4, internet 84), the first gateway comprising: a receiver (see figure 5, internet module) configured to receive a call from the first client modem over a first telephone line (see column 12, lines 23-45, internet call is made, and figure 4, internet module 72);

a controller (see figure 5, processor 87) configured to negotiate, in response to the call, over the first telephone line with the first client modem to establish a first physical connection (see column 10, lines 10-67, internet module establishes connection with modem, see column 9, lines 34-40, modem establishes line connection to the internet module) between the first client modem and a first gateway of said first gateway (see response to argument), wherein the controller is further configured to inform a second gateway (see, receiver router, column 10, lines 1-30, the packets are dispatched fro originator and to the destination router and internet module 74) of the call over the packet network and establish a gateway-to-gateway transport link (see TCP/IP format, column 10, lines 1-30) with the second gateway over the packet network (see figure 4, internet);

wherein the controller is further configured to determine a set of data link parameters supported by the first client modem, the first gateway modem, a second

gateway of the second gateway and the second client modem(see column 12, lines 10-23, communication between modem 64 and modem 66, would not be possible if link parameters are not set, the destination router and its processor perform inverse functions of the originating router and make necessary translations and column 6, lines 5-22, TCAP negotiations, specifying routing information),

and establish a first data link protocol over the first physical modem connection using the set of data link parameters (see column 6, lines 60-64, the lines or trunks may use digital protocols such as T1 or ISDN, each interface module also include digital service unit to generate tones, see column 12, lines 10-23, communication between modem 64 and modem 66, would not be possible if link parameters are not set, the destination router and its processor perform inverse functions of the originating router and make necessary translations);

wherein data is communicated between the first client modem and the second client modem over an end-to-end reliable connection (see TCP/IP format, column 10, lines 1-30) between the first client modem at one end and the second client modem at the other end (see figure 4, modem 64 and modem 66, see column 6, lines 55-65, T1), wherein the end-to-end reliable connection uses the set of data link parameters (see column 12, lines 10-23, communication between modem 64 and modem 66, would not be possible if link parameters are not set, the destination router and its processor perform inverse functions of the originating router and make necessary translations).

Farris does not expressly disclose that the first gateway has a modem that establishes the physical connection to the client modem, and the modem handshaking

communications of receiving a first set of data link parameters supported by said first client modem and receiving a second set of data link parameters supported by both a second gateway modem of said second gateway and said second client modem, and a controller for harmonizing said set of data link parameters supported by said first gateway with said first set of data link parameters supported by said first client modem and second set of data link parameters to determine a final set of data link parameters supported by all modems.

Walsh discloses that the first gateway has a modem that establishes the physical connection to the client modem (see figure 14 c, modem card and gateway card), and the modem handshaking communications of receiving a first set of data link parameters supported by said first client modem (see column 23, lines 32-37, data is passed between the modems on cards 403-408 and gateway card 605, data link layer entity that builds/parses outgoing/incoming frames, the data link layer segments data into messages or frames) and receiving a second set of data link parameters supported by both a second gateway modem of said second gateway and said second client modem (see column 29, lines 5-10, call setup between client c1 and client c13, see column 29, lines 25-30, demodulates according to the modulation standard dictated by the set mode parameters transmitted to modem447, see column 29, lines 40-42, the TCP/IP protocol is employed to provide an end-to-end connection-oriented path to client c13, see also column 30, lines 5-10, an outgoing call according to the modulation standard dictated by the set mode parameters transmitted over the packet bus) and a controller for harmonizing said set of data link parameters (see column 23, lines 32-37, data is

passed between the modems on cards 403-408 and gateway card 605, data link layer entity that builds/parses outgoing/incoming frames, the data link layer segments data into messages or frames) supported by said first gateway with said first set of data link parameters supported by said first client modem between said first gateway modem and said first client modem (see figure 14b and figure 14c, modem card 408 and gateway card 605, see column 25, lines 20-30, while in negotiation state, each card sends an XID frame to the other card 605, the XID frame contains information that is used to get both cards in a link to agree on certain parameters, such as receive window size and packet bus block size, after the exchange of XID frames, it stores various agreed parameters) and second set of data link parameters (see column 29, lines 5-10, call setup between client c1 and client c13, see column 29, lines 25-30, demodulates according to the modulation standard dictated by the set mode parameters transmitted to modem447, see column 29, lines 40-42, the TCP/IP protocol is employed to provide an end-to-end connection-oriented path to client c13, see also column 30, lines 5-10, an outgoing call according to the modulation standard dictated by the set mode parameters transmitted over the packet bus) to determine a final set of data link parameters supported by all modems (see column 29, lines 5-10, call setup between client c1 and client c13, see column 29, lines 25-30, demodulates according to the modulation standard dictated by the set mode parameters transmitted to modem447, see column 29, lines 40-42, the TCP/IP protocol is employed to provide an end-to-end connection-oriented path to client c13).

Walsh and Farris are analogous art since they are from the same field of endeavor of voice calls over the packet network.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to use Walsh's technique of having the first gateway having a modem that establishes the physical connection to the client modem (see figure 14 c, modem card and gateway card), and the modem handshaking communications of receiving a first set of data link parameters supported by said first client modem (see column 23, lines 32-37, data is passed between the modems on cards 403-408 and gateway card 605, data link layer entity that builds/parses outgoing/incoming frames, the data link layer segments data into messages or frames) and receiving a second set of data link parameters supported by both a second gateway modem of said second gateway and said second client modem (see column 29, lines 5-10, call setup between client c1 and client c13, see column 29, lines 25-30, demodulates according to the modulation standard dictated by the set mode parameters transmitted to modem447, see column 29, lines 40-42, the TCP/IP protocol is employed to provide an end-to-end connection-oriented path to client c13, see also column 30, lines 5-10, an outgoing call according to the modulation standard dictated by the set mode parameters transmitted over the packet bus) and a controller for harmonizing said set of data link parameters (see column 23, lines 32-37, data is passed between the modems on cards 403-408 and gateway card 605, data link layer entity that builds/parses outgoing/incoming frames, the data link layer segments data into messages or frames) supported by said first gateway with said first set of data link parameters supported by said first client modem

between said first gateway modem and said first client modem (see figure 14b and figure 14c, modem card 408 and gateway card 605, see column 25, lines 20-30, while in negotiation state, each card sends an XID frame to the other card 605, the XID frame contains information that is used to get both cards in a link to agree on certain parameters, such as receive window size and packet bus block size, after the exchange of XID frames, it stores various agreed parameters) and second set of data link parameters (see column 29, lines 5-10, call setup between client c1 and client c13, see column 29, lines 25-30, demodulates according to the modulation standard dictated by the set mode parameters transmitted to modem447, see column 29, lines 40-42, the TCP/IP protocol is employed to provide an end-to-end connection-oriented path to client c13, see also column 30, lines 5-10, an outgoing call according to the modulation standard dictated by the set mode parameters transmitted over the packet bus) to determine a final set of data link parameters supported by all modems (see column 29, lines 5-10, call setup between client c1 and client c13, see column 29, lines 25-30, demodulates according to the modulation standard dictated by the set mode parameters transmitted to modem447, see column 29, lines 40-42, the TCP/IP protocol is employed to provide an end-to-end connection-oriented path to client c13) as a modification in Farris's VOIP gateway method, apparatus and system (see figure 4, internet module 72).

The motivation to combine would have been to have a gateway modem and client modem that is capable of detecting errors on the link in the event of any

unrecoverable error that occurs affecting the communications between the modems (see column 24, lines 66-67 and column 25, lines 1-3, Walsh).

Note: the functions following the phrase "capable of" recited in claims 38, line 1, is not considered as positive limitation, i.e. the claim does not require such limitation but only require the ability to perform such functions. Therefore, it is suggested that the applicant remove the phrase "capable of" to receive full patentable weight for the subsequent limitations.

As per claim 39, Farris et al. teaches of a first gateway (see figure 4, block 72), wherein the second gateway informs the second client modem of the call over a second telephone line (see, receiver router, column 10, lines 1-30, the packets are dispatched fro originator and to the destination router and internet module 74), and wherein the second gateway negotiates with the second client modem over the second telephone line to establish a second physical modem connection (see column 12, lines 10-23, communication between modem 64 and modem 66, would not be possible if link parameters are not set, the destination router and its processor perform inverse functions of the originating router and make necessary translations).

As per claim 40, Walsh teaches of a controller, wherein, during the harmonizing, the second gateway establishes a second data link protocol over the second physical modem connection using the set of data link parameters (see column 29, lines 5-10, call setup between client c1 and client c13, see column 29, lines 25-30, demodulates according to the modulation standard dictated by the set mode parameters transmitted to modem447, see column 29, lines 40-42, the TCP/IP protocol is employed to provide

an end-to-end connection-oriented path to client c13, see also column 30, lines 5-10, an outgoing call according to the modulation standard dictated by the set mode parameters transmitted over the packet bus).

Walsh and Farris are analogous art since they are from the same field of endeavor of voice calls over the packet network.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to use Walsh's technique wherein, during the harmonizing, the second gateway establishes a second data link protocol over the second physical modem connection using the set of data link parameters (see column 29, lines 5-10, call setup between client c1 and client c13, see column 29, lines 25-30, demodulates according to the modulation standard dictated by the set mode parameters transmitted to modem447, see column 29, lines 40-42, the TCP/IP protocol is employed to provide an end-to-end connection-oriented path to client c13, see also column 30, lines 5-10, an outgoing call according to the modulation standard dictated by the set mode parameters transmitted over the packet bus) as a modification in Farris's VOIP gateway method, apparatus and system (see figure 4, internet module 72).

The motivation to combine would have been to have a gateway modem and client modem that is capable of detecting errors on the link in the event of any unrecoverable error that occurs affecting the communications between the modems (see column 24, lines 66-67 and column 25, lines 1-3, Walsh).

As per claim 41, Farris et al. teaches of a first gateway device, wherein the gateway-to-gateway transport link is a reliable transport link (see TCP/IP format, column

10, lines 1-30). However using an unreliable transport link as the gateway-to-gateway transport link is well known in the art.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use an unreliable transport link as the gateway-to-gateway transport link in Farris's and Walsh's telecommunication method and devices. The motivation to combine would have been to have both reliable and unreliable transport link such as TCP and UDP, so that the method can provide and charge its users, according to different types of quality of service.

As per claim 57, Farris teaches of a first gateway (see figure 4, internet module 72) capable of establishing data communication between a first client modem (see figure 4, modem 64) and a second client modem (see figure 4, modem 66) over a packet network (see figure 4, internet 84), the first gateway comprising: a receiver (see figure 5, internet module) configured to receive a call from the first client modem over a first telephone line (see column 12, lines 23-45, internet call is made, and figure 4, internet module 72), but does not expressly disclose the controller is configured to harmonize said set of data link parameters supported by said first gateway with said first set of data link parameters supported by said first client modem is performed by exchanging XID frames between said first gateway modem and said first client modem.

Walsh discloses controller is configured to harmonize said set of data link parameters (see column 23, lines 32-37, data is passed between the modems on cards 403-408 and gateway card 605, data link layer entity that builds/parses outgoing/incoming frames, the data link layer segments data into messages or frames)

supported by said first gateway with said first set of data link parameters supported by said first client modem is performed by exchanging XID frames between said first gateway modem and said first client modem (see figure 14b and figure 14c, modem card 408 and gateway card 605, see column 25, lines 20-30, while in negotiation state, each card sends an XID frame to the other card 605, the XID frame contains information that is used to get both cards in a link to agree on certain parameters, such as receive window size and packet bus block size, after the exchange of XID frames, it stores various agreed parameters).

Walsh and Farris are analogous art since they are from the same field of endeavor of voice calls over the packet network.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to use Walsh's technique of using controller is configured to harmonize said set of data link parameters (see column 23, lines 32-37, data is passed between the modems on cards 403-408 and gateway card 605, data link layer entity that builds/parses outgoing/incoming frames, the data link layer segments data into messages or frames) supported by said first gateway with said first set of data link parameters supported by said first client modem is performed by exchanging XID frames between said first gateway modem and said first client modem (see figure 14b and figure 14c, modem card 408 and gateway card 605, see column 25, lines 20-30, while in negotiation state, each card sends an XID frame to the other card 605, the XID frame contains information that is used to get both cards in a link to agree on certain parameters, such as receive window size and packet bus block size, after the exchange

of XID frames, it stores various agreed parameters) as a modification in Farris's VOIP gateway method, apparatus and system (see figure 4, internet module 72).

The motivation to combine would have been to have a gateway modem and client modem that is capable of detecting errors on the link in the event of any unrecoverable error that occurs affecting the communications between the modems (see column 24, lines 66-67 and column 25, lines 1-3, Walsh).

10. Claims 34 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farris et al. (US 6438218 B1) in view of Walsh et al. (US 6636519 B1) further in view of Endo (US 6381038 B1).

As per claim 34, Farris and Walsh teach of a method wherein the harmonizing of the set of data link parameters (see column 12, lines 10-23 and column 6, lines 5-22, Farris, communication between modem 64 and modem 66, would not be possible if link parameters are not set, the destination router and its processor perform inverse functions of the originating router and make necessary translation) includes initiating the first data link protocol (see column 6, lines 60-64, Farris), but does not expressly disclose stalling the first data link protocol.

Endo et al. teaches of a method of stalling the first data link protocol (see RNR, figures 12-15, RR and RNR signals transmission and reception, and columns 25, lines 20-25, receiving section has a function of detecting a response signal from the gateway relative to signal transmission to the gateway, and a further function of detecting RNR(receive not ready)).

Farris, Walsh and Endo are analogous art because they are from the same field of endeavor of modem-to-modem communications over the Internet through gateways.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use Endo's method of stalling the first data link protocol (see RNR, figures 12-15, RR and RNR signals transmission and reception, and columns 25, lines 20-25, receiving section has a function of detecting a response signal from the gateway relative to signal transmission to the gateway, and a further function of detecting RNR(receive not ready)) in Farris's method of communication between a modem and gateway (see figure 4) and in Walsh's technique harmonizing set of data link parameters (see column 23, lines 32-37, data is passed between the modems on cards 403-408 and gateway card 605) by exchanging XID frames between said first gateway modem and said first client modem (see column 25, lines 20-30, while in negotiation state, each card sends an XID frame to the other card 605).

The motivation to combine would have been to have a gateway in a modem-to-modem communication system, which can achieve reliable communication by reducing a possibility of communication errors.

As per claim 42, Farris and Walsh teach of a first gateway device, wherein the determining of the set of data link parameters (see column 12, lines 10-23, communication between modem 64 and modem 66, would not be possible if link parameters are not set, the destination router and its processor perform inverse functions of the originating router and make necessary translation and column 6, lines

5-22, Farris) includes initiating the first data link protocol (see column 6, lines 60-64, Farris), but does not expressly disclose stalling the first data link protocol.

Endo et al. teaches of a method of stalling the first data link protocol (see RNR, figures 12-15, RR and RNR signals transmission and reception, and columns 25, lines 20-25, receiving section has a function of detecting a response signal from the gateway relative to signal transmission to the gateway, and a further function of detecting RNR(receive not ready)).

Farris, Walsh and Endo are analogous art because they are from the same field of endeavor of modem-to-modem communications over the Internet through gateways.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use Endo's technique of stalling the first data link protocol (see RNR, figures 12-15, RR and RNR signals transmission and reception, and columns 25, lines 20-25, receiving section has a function of detecting a response signal from the gateway relative to signal transmission to the gateway, and a further function of detecting RNR(receive not ready)) in Farris's method of communication between a modem and gateway and in Walsh's technique harmonizing set of data link parameters (see column 23, lines 32-37, data is passed between the modems on cards 403-408 and gateway card 605) by exchanging XID frames between said first gateway modem and said first client modem (see column 25, lines 20-30, while in negotiation state, each card sends an XID frame to the other card 605).

The motivation to combine would have been to have a gateway in a modem-to-modem communication system, which can achieve reliable communication by reducing a possibility of communication errors.

11. Claims 35-37 and 43-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farris et al. (US 6438218 B1) in view of Walsh et al. (US 6636519 B1) further in view of Endo (US 6381038 B1) and further in view of Davis et al. (US 6049902).

As per claim 35, Farris, Walsh, and Endo teach of a method of determining the set of data link parameters and the first data link protocol (see column 12, lines 10-23, communication between modem 64 and modem 66, would not be possible if link parameters are not set, the destination router and its processor perform inverse functions of the originating router and make necessary translation and column 6, lines 5-22, Farris), but does not expressly disclose the protocol being based on ITU V.42 standard.

Davis et al. (US 6049902) discloses a protocol being based on ITU V.42 standard (see column 6, lines 10-20).

Farris, Davies, Walsh and Endo are analogous art because they are from the same field of endeavor of modem-to-modem communications over the Internet through gateways.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use Davis et al.'s ITU V.42 standard (see column 6, lines 10-20) in Farris data link protocol for reliable communications (see column 12, lines 10-23 and

column 6, lines 5-22, Farris) Endo's technique of stalling the first data link protocol (see RNR, figures 12-15, and columns 25, 26, and 28) and in Walsh's technique harmonizing set of data link parameters (see column 23, lines 32-37, data is passed between the modems on cards 403-408 and gateway card 605) by exchanging XID frames between said first gateway modem and said first client modem (see column 25, lines 20-30, while in negotiation state, each card sends an XID frame to the other card 605).

The motivation would have been to have a standard protocol such as the ITU V series, which describe modem operation and design in order to permit different, conforming computer systems to communicate. Thus, using a protocol such as the ITU V.42 protocol, which is an error detection and recovery via retransmission protocol, would overcome data communication errors.

As per claim 36, Endo teach of a method, wherein the stalling includes transmitting an RNR by the first gateway to the first client modem (see RNR, figures 12-15, RR and RNR signals transmission and reception, and columns 25, lines 20-25, receiving section has a function of detecting a response signal from the gateway relative to signal transmission to the gateway, and a further function of detecting RNR (receive not ready)).

As per claim 37, Farris teach of a method, wherein the harmonizing of the set of data link parameters (see column 12, lines 10-23 and column 6, lines 5-22, Farris) but do not expressly disclose further including resuming the first data link protocol by transmitting an RR to the first modem

Endo discloses resuming the first data link protocol by transmitting an RR to the first modem ((see RNR, figures 12-15, RR and RNR signals transmission and reception, and columns 25, lines 20-25, receiving section has a function of detecting a response signal from the gateway relative to signal transmission to the gateway, and a further function of detecting RNR (receive not ready)).

Farris, Davies, Walsh and Endo are analogous art because they are from the same field of endeavor of modem-to-modem communications over the Internet through gateways.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use Davis et al.'s ITU V.42 standard (see column 6, lines 10-20) in Farris data link protocol for reliable communications (see column 12, lines 10-23 and column 6, lines 5-22, Farris) in Endo's technique of stalling the first data link protocol (see RNR, figures 12-15, RR and RNR signals transmission and reception, and columns 25, lines 20-25, receiving section has a function of detecting a response signal from the gateway relative to signal transmission to the gateway, and a further function of detecting RNR(receive not ready)) and in Walsh's technique harmonizing set of data link parameters (see column 23, lines 32-37, data is passed between the modems on cards 403-408 and gateway card 605) by exchanging XID frames between said first gateway modem and said first client modem (see column 25, lines 20-30, while in negotiation state, each card sends an XID frame to the other card 605).

The motivation would have been to have a standard protocol such as the ITU V series, which describe modem operation and design in order to permit different,

conforming computer systems to communicate. Thus, using a protocol such as the ITU V.42 protocol, which is an error detection and recovery via retransmission protocol, would overcome data communication errors.

As per claim 43, Farris, Walsh, and Endo teach of a first gateway device (see column 12, lines 10-23 and column 6, lines 5-22, Farris), determining the set of data link parameters and the first data link protocol (see column 12, lines 10-23 and column 6, lines 5-22, Farris), but does not expressly disclose the protocol being based on ITU V.42 standard.

Davis et al. (US 6049902) discloses a protocol being based on ITU V.42 standard (see column 6, lines 10-20).

Farris, Davies, Walsh and Endo are analogous art because they are from the same field of endeavor of modem-to-modem communications over the Internet through gateways.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use Davis et al.'s ITU V.42 standard (see column 6, lines 10-20) in Farris data link protocol for reliable communications (see column 12, lines 10-23 and column 6, lines 5-22, Farris) Endo's technique of stalling the first data link protocol (see RNR, figures 12-15, RR and RNR signals transmission and reception, and columns 25, lines 20-25, receiving section has a function of detecting a response signal from the gateway relative to signal transmission to the gateway, and a further function of detecting RNR(receive not ready)) and in Walsh's technique harmonizing set of data link parameters (see column 23, lines 32-37, data is passed between the modems on

cards 403-408 and gateway card 605) by exchanging XID frames between said first gateway modem and said first client modem (see column 25, lines 20-30, while in negotiation state, each card sends an XID frame to the other card 605).

The motivation would have been to have a standard protocol such as the ITU V series, which describe modem operation and design in order to permit different, conforming computer systems to communicate. Thus, using a protocol such as the ITU V.42 protocol, which is an error detection and recovery via retransmission protocol, would overcome data communication errors.

As per claim 44, Endo et al. teach of the first gateway device, wherein the stalling includes transmitting an RNR by the first gateway to the first client modem (see RNR, figures 12-15, RR and RNR signals transmission and reception, and columns 25, lines 20-25, receiving section has a function of detecting a response signal from the gateway relative to signal transmission to the gateway, and a further function of detecting RNR (receive not ready)).

As per claim 45, Farris et al. and Endo et al. teach of the first gateway device, wherein the determining of the final set of data link parameters (see column 12, lines 10-23, communication between modem 64 and modem 66, would not be possible if link parameters are not set, the destination router and its processor perform inverse functions of the originating router and make necessary translation and column 6, lines 5-22, Farris) but do not expressly disclose further including resuming the first data link protocol by transmitting an RR to the first modem.

Endo discloses resuming the first data link protocol by transmitting an RR to the first modem (see column 28).

Farris, Davies, Walsh and Endo are analogous art because they are from the same field of endeavor of modem-to-modem communications over the Internet through gateways

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use Davis et al.'s ITU V.42 standard (see column 6, lines 10-20) in Farris data link protocol for reliable communications (see column 12, lines 10-23 and column 6, lines 5-22, Farris) Endo's technique of stalling the first data link protocol (see RNR, figures 12-15, RR and RNR signals transmission and reception, and columns 25, lines 20-25, receiving section has a function of detecting a response signal from the gateway relative to signal transmission to the gateway, and a further function of detecting RNR (receive not ready)) and in Walsh's technique harmonizing set of data link parameters (see column 23, lines 32-37, data is passed between the modems on cards 403-408 and gateway card 605) by exchanging XID frames between said first gateway modem and said first client modem (see column 25, lines 20-30, while in negotiation state, each card sends an XID frame to the other card 605).

The motivation would have been to have a standard protocol such as the ITU V series, which describe modem operation and design in order to permit different, conforming computer systems to communicate. Thus, using a protocol such as the ITU V.42 protocol, which is an error detection and recovery via retransmission protocol, would overcome data communication errors.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See form 892.

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ABDULLAH RIYAMI whose telephone number is (571)270-3119. The examiner can normally be reached on Monday through Thursday 8am-5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Aung Moe can be reached on (571) 272-7314. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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